

PATENT COOPERATION TREATY

REC'D 24 AUG 2000

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

15

Applicant's or agent's file reference CM1764Q/VB		FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US99/09782	International filing date (day/month/year) 05/05/1999	Priority date (day/month/year) 05/05/1998	
International Patent Classification (IPC) or national classification and IPC B29D7/01			
Applicant THE PROCTER & GAMBLE COMPANY et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 29/11/1999	Date of completion of this report 22.08.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Welsch, H Telephone No. +49 89 2399 2907



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/09782

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-20 as originally filed

Claims, No.:

1-15 as originally filed

Drawings, sheets:

1/4-4/4 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US99/09782

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-15
	No: Claims
Inventive step (IS)	Yes: Claims 1-15
	No: Claims
Industrial applicability (IA)	Yes: Claims 1-15
	No: Claims

2. Citations and explanations

see separate sheet

1. Item V:

- 1.1 The application concerns a web material with a specific elongation behaviour and a process for making such webs.
- 1.2 Independent claim 1 - together with dependent claims 2 to 14 which concern particular embodiments of the subject-matter of claim 1 - define such web material with discontinuous expansion behaviour. It expands with relatively low resistance up to a certain extent and then shows a rapid increase in expansion tension.
- 1.3 Independent claim 15 defines the necessary process steps for making such a web.
- 1.4 Since the available prior art gives no decisive hints the subject-matter of the application appears to fulfill the requirements of Article 33(2) and (3) PCT.

PATENT COOPERATION TREATY

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NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
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 Box PCT
 Washington, D.C. 20231
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in its capacity as elected Office

Date of mailing (day/month/year) 12 January 2000 (12.01.00)	
International application No. PCT/US99/09782	Applicant's or agent's file reference CM1764Q/VB
International filing date (day/month/year) 05 May 1999 (05.05.99)	Priority date (day/month/year) 05 May 1998 (05.05.98)
Applicant FUCHS, Christofer et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 29 November 1999 (29.11.99)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Kiwa Mpay Telephone No.: (41-22) 338.83.38
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B29D 7/01, B29C 55/18	A1	(11) International Publication Number: WO 99/56941 (43) International Publication Date: 11 November 1999 (11.11.99)																																
(21) International Application Number: PCT/US99/09782 (22) International Filing Date: 5 May 1999 (05.05.99) (30) Priority Data: 98108123.5 5 May 1998 (05.05.98) EP (71) Applicant (for all designated States except US): THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): FUCHS, Christofer [DE/DE]; Hartmurth 11, D-61476 Kronberg (DE). DIVO, Michael [DE/DE]; Feldbergstrasse 14, D-61381 Friedrichsdorf (DE). BUSAM, Ludwig [DE/DE]; Talstrasse 17, D-65510 Hunstetten (DE). (74) Agents: REED, T., David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).		(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>																																
(54) Title: DISCONTINUOUSLY EXPANDABLE WEB MATERIALS																																		
(57) Abstract <p>The present invention is a web material which can be used in the production of large quantities of articles which are assembled from, inter alia, continuously fed web materials. In particular, the web material of the present invention can be expanded by a predetermined amount whilst exhibiting a relatively low resistance to expansion. This material property is assessed in the Discontinuous Expansion Test which determines the Relative Expansion Tension reduction during the discontinuous expansion. A web material according to the present invention has a Relative Expansion Tension Reduction of at least 50 %. Another object of the present invention is the process for making such discontinuously expandable web materials comprising the step of incorporating longitudinal expansion means and optionally tearable expansion obstruction means into the web material.</p> <div style="display: flex; align-items: center;"> <table border="1" style="margin-left: 20px;"> <caption>Approximate data points from the graph</caption> <thead> <tr> <th>Elongation (%)</th> <th>Expansion Tension (N/0.0254m)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>10</td><td>6</td></tr> <tr><td>15</td><td>10</td></tr> <tr><td>20</td><td>1</td></tr> <tr><td>30</td><td>1</td></tr> <tr><td>40</td><td>2</td></tr> <tr><td>50</td><td>1</td></tr> <tr><td>60</td><td>1</td></tr> <tr><td>70</td><td>6</td></tr> <tr><td>80</td><td>12</td></tr> <tr><td>90</td><td>15</td></tr> <tr><td>100</td><td>17</td></tr> <tr><td>110</td><td>18</td></tr> <tr><td>115</td><td>18</td></tr> <tr><td>120</td><td>0</td></tr> </tbody> </table> </div>			Elongation (%)	Expansion Tension (N/0.0254m)	0	0	10	6	15	10	20	1	30	1	40	2	50	1	60	1	70	6	80	12	90	15	100	17	110	18	115	18	120	0
Elongation (%)	Expansion Tension (N/0.0254m)																																	
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10	6																																	
15	10																																	
20	1																																	
30	1																																	
40	2																																	
50	1																																	
60	1																																	
70	6																																	
80	12																																	
90	15																																	
100	17																																	
110	18																																	
115	18																																	
120	0																																	

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/09782

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 B29D7/01 B29C55/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 B29C B32B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 474 124 A (SCHULTZ) 21 June 1949 (1949-06-21) column 3, line 40 - line 63; figure 2 ---	1, 15
A	EP 0 800 959 A (TAKATA CORP) 15 October 1997 (1997-10-15) column 5, line 6 - line 9 column 5, line 38 - line 45; figure 6 ---	1
A	EP 0 665 161 A (RASMUSSEN O B) 2 August 1995 (1995-08-02) page 9, line 1 - line 53; figures 4A, 5A ---	1, 15
A	GB 2 111 012 A (SECR DEFENCE) 29 June 1983 (1983-06-29) page 1, line 94 - line 107; figure 2 --- -/--	1

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

- 16 August 1999

Date of mailing of the international search report

26/08/1999

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Attalla, G

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/09782

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 691 035 A (MANSFIELD MICHELE A ET AL) 25 November 1997 (1997-11-25) cited in the application figure 6</p> <p>-----</p>	1,15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/09782

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 2474124	A	21-06-1949	NONE		
EP 0800959	A	15-10-1997	JP	9272389 A	21-10-1997
EP 0665161	A	02-08-1995	AT	130566 T	15-12-1995
			AT	177385 T	15-03-1999
			AU	637047 B	20-05-1993
			AU	3444689 A	24-11-1989
			CA	1332024 A	20-09-1994
			CN	1038786 A, B	17-01-1990
			DE	68924865 D	04-01-1996
			DE	68924865 T	14-11-1996
			DE	68928948 D	15-04-1999
			DK	250590 A	17-12-1990
			EP	0338747 A	25-10-1989
			EP	0411007 A	06-02-1991
			ES	2082773 T	01-04-1996
			WO	8910312 A	02-11-1989
			GR	3019032 T	31-05-1996
			HK	1007543 A	16-04-1999
			IE	72159 B	26-03-1997
			JP	2632583 B	23-07-1997
			JP	3505184 T	14-11-1991
			MX	169245 B	25-06-1993
			NO	302876 B	04-05-1998
			PT	90306 A, B	10-11-1989
			RU	2050310 C	20-12-1995
			US	5205650 A	27-04-1993
			US	5330133 A	19-07-1994
GB 2111012	A	29-06-1983	NONE		
US 5691035	A	25-11-1997	US	5518801 A	21-05-1996
			AU	7370294 A	28-02-1995
			BR	9407220 A	17-09-1996
			CA	2168771 A	09-02-1995
			CN	1132471 A	02-10-1996
			CZ	9600307 A	17-07-1996
			DE	69418043 D	27-05-1999
			EP	0712304 A	22-05-1996
			ES	2131204 T	16-07-1999
			FI	960495 A	02-04-1996
			HU	73593 A	28-08-1996
			JP	9501847 T	25-02-1997
			NO	960424 A	02-04-1996
			NZ	269985 A	26-06-1998
			SG	55162 A	21-12-1998
			WO	9503765 A	09-02-1995
			US	5723087 A	03-03-1998
			US	5891544 A	06-04-1999
			US	5916663 A	29-06-1996

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 D06C D06M D04H A61F A41B B29C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<input checked="" type="checkbox"/>	Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/>	Patent family members are listed in annex.
° Special categories of cited documents :			

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"P" document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search

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Date of mailing of the international search report

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Authorized officer _____

Mirza, A

INTERNATIONAL SEARCH REPORT

Inter. Application No

PCT/US 99/09783

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 259 902 A (MUCKENFUHS DELMAR R) 9 November 1993 (1993-11-09) column 1, line 55 - column 2, line 12; claims; figures	1,4
A	column 5, line 59 - line 68 column 11, line 27 - line 35 ---	2,3,5, 11,12
X	DE 28 10 680 A (HARTMANN PAUL AG) 20 September 1979 (1979-09-20) claims; figures	1,4
A	---	11
X	US 5 468 428 A (HANSCHEN THOMAS P ET AL) 21 November 1995 (1995-11-21) column 18, line 21 - line 28; claims; examples; tables	1,4
A	---	11
X	US 3 694 815 A (BURGER WILLIAM H) 3 October 1972 (1972-10-03) the whole document	1
A	---	2,3,11
A	EP 0 572 116 A (KATO TALL ;ZIN CO LTD (JP)) 1 December 1993 (1993-12-01) abstract; figures -----	1